



SNS COLLEGE OF TECHNOLOGY



Coimbatore-35.

An Autonomous Institution

**Accredited by NBA – AICTE and Accredited by NAAC – UGC with ‘A++’ Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai**

**DEPARTMENT OF COMPUTER SCIENCE ENGINEERING
COURSE CODE & NAME : 23CST205 - Object Oriented Programming Using Java**

II YEAR/ III SEMESTER

UNIT – I INTRODUCTION TO OOP

Topic:Encapsulation



Encapsulation

- Encapsulation is a process of wrapping code and data together into a single unit.
- For example, a capsule which is mixed of several medicines.
- We can create a fully encapsulated class in Java by making all the data members of the class private.
- Now we can use setter and getter methods to set and get the data in it.
- The Java Bean class is the example of a fully encapsulated class.



Encapsulation

Inheritance

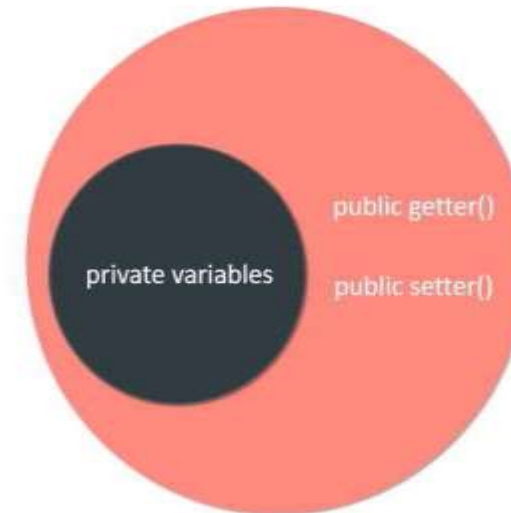
Polymorphism

Abstraction

Encapsulation

Encapsulation is the mechanism of wrapping up of data and code acting on the methods together as a single unit

It is achieved by declaring the variables of a class as private and then providing the public setter and getter methods to modify and view the variables values





Encapsulation

Advantage of Encapsulation:

- It provides you the **control over the data**.
- Suppose you want to set the value of id which should be greater than 100 only, you can write the logic inside the setter method.
- You can write the logic not to store the negative numbers in the setter methods.
- It is a way to achieve **data hiding** in Java because other class will not be able to access the data through the private data members.
- The encapsulate class is **easy to test**. So, it is better for unit testing.
- The standard IDE's are providing the facility to generate the getters and setters. So, it is **easy and fast to create an encapsulated** class in Java.

